SOLAR PHENOMENA.

Sun spots—The following observations, made by Mr. D. P. Todd, upon the spots of the sun, have been kindly communicated by Rear Admiral John Rodgers, U. S. N., Superintendent of the Naval Observatory:

August, 1877.	No. of new—		Disappeared by solar rotation.		Reappeared by solar rotation.		Total number visible.		Remarks.
	Groups	Spots.	Groups	Spots.	Groups	Spots.	Groups	Spots.	
3rd, 2 p. m···	0	0	0	4	0	0	1	1	
4th, 8 a. m···	0	0	0	0	0	0	0	0	
4th, 5 p. m···	0	0	0	0	0	0	0	0	
5th, 10 a. m···	0	0	0	0	0	0	0	0	
5th, 6 p. m···	0	0	0	0	0	0	0	0	
6th, 10 a. m···	0	0	0	0	0	0	0	0	
8th, 10 a. m···	0	0	0	0	0	0	0	0	
8th, 6 p. m···	0	0	0	0	0	0	0	0	
11th, 8 a. m···	0	0	0	0	0	0	0	0	
11th, 6 p. m···	0	0	0	0	0	0	0	0	
12th, 10 a. m···	0	0	0	0	0	0	0	0	
14th, 2 p. m···	0	0	0	0	0	0	0	0	
17th, 9 a. m···	0	0	0	0	0	0	0	0	
17th, 5 p. m···	0	0	0	0	0	0	0	0	
18th, 9 a. m···	0	0	0	0	0	0	0	0	
19th, 2 p. m···	0	0	0	0	0	0	0	0	
20th, 5 p. m···	0	0	0	0	0	0	0	0	
22nd, 5 p. m···	1	2	0	0	1	2	1	2	
24th, 4 p. m···	0	6	0	0	0	6	1	8	
25th, 4 p. m···	0	0	0	0	0	0	1	8	
26th, 5 p. m···	0	0	0	0	0	0	1	8	
28th, 5 p. m···	0	0	0	0	0	0	1	6	
29th, 5 p. m···	0	0	0	0	0	0	1	2	
30th, 5 p. m···	0	0	0	0	0	0	1	2	

NOTES AND EXTRACTS.

Winds of the South Atlantic.—M. Brault announces the publication, by the French Marine, of a series of new meteorological charts, giving the direction and force of the winds of the South Atlantic for each of the four seasons, the charts being similar to those published by M. Brault about two years ago, on the winds of the North Atlantic. The new charts contain the result of 189,573 observations of the wind. The general movement of the winds in summer over this portion of the globe, resemble an immense whirl, whose centre is about 30° to 35° latitude S., and 10° to 20° longitude W. The whirling movement is in a direction contrary to that of the hands of a watch, being thus opposite to the general circulation of the atmosphere over the North Atlantic in summer. Out of this centre winds blow in all directions, the more important being the southeast trades, which are deflected to south and south-southwest off the coast of Africa, and to east-southeast and east on approaching the coast of America: these in succession, northeast, north and northwest winds on advancing southward along the coast of America, merging finally in the westerly winds which blow across the Atlantic from Cape Horn to the Cape of Good Hope. Looking both at the force and direction of the winds, M. Brault concludes that the results establish beyond a doubt the fact that, contrary to the views entertained up to a comparatively recent date, there does not exist any tropical zone stretching across the South Atlantic, characterized by the prevalence of calms and light variable breezes. These results are entirely in accord with recent researches into the atmospheric movements over this region, and are of peculiar interest when viewed in connection with the distribution of atmospheric pressure and its variation, with season, over South America, the South Atlantic and South Africa.—Nature, Aug. 2nd.

M. Alluard, Director of the Observatory at Puy-de-dome, France has noticed some remarkable differences of pressure, as indicated by self-registering barometers. One was placed at the summit of Puy-de-dome and the other at Clermont-Ferraud, distant about seven English miles, and remarkable discrepancies were found on comparing the two records, which could not be satisfactorily explained by differences of temperature nor by Laplaces formula for the barometric determination of heights.

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